A2 cont

4. (Amended) A device according to claim 1, characterized in that it comprises diffraction means formed in a layer of the substrate at a distance from the chromophoric elements (5) and arranged so as to diffract the light emitted into the substrate towards the collecting device.

A3

11. (Amended) A device according to claim 9, characterized in that said upper layer is produced from a porous material, in particular silica gel.

12. (Amended) A device according to claim 9, characterized in that the upper layer comprises holes at selected locations, to encourage migration of chromophoric elements (5) towards said sites.

13. (Amended) A device according to claim 10, characterized in that one of the mirrors or each mirror is constituted by a multiplicity of dielectric layers.

A4

27. (Amended) A device according to claim 24, characterized in that it comprises a planar waveguide (14) placed substantially below the chromophoric elements (5) and arranged to collect the light emitted by said chromophoric elements in the direction of support means (1) and guide it in the direction of the planar resonator (12).

A5

30. (Amended) A device according to claim 28, characterized in that the upper surface of the substrate (2) comprises an irregular film of silver or a multiplicity of organized silver nanostructures, said film or said nanostructures being capable of receiving chromophoric elements (5).

AS cont

31. (Amended) A device according to claim 2, characterized in that the substrate (2) is associated with a matrix (17) of charge coupled (CCD) light detection elements, at least some of these detecting elements being capable of being electronically addressed in correspondence with at least one chromophoric element (5).

34. (Amended) A device according to claim 31, characterized in that it comprises, between the matrix (17) and the substrate (2), reflective means (3) arranged to reject light intended to excite the chromophoric elements.

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35. (Amended) A device according to claim 31, characterized in that it comprises an absorbent layer (23) that is insensitive to the angle of incidences located between the matrix of detection elements (17) and said reflective means (3) arranged below the chromophoric elements (5).

36. (Amended) A device according to claim 1, characterized in that the collecting device comprises a matrix (27) of photodetectors (17) arranged above the face of the substrate (2) carrying the chromophores (5) and receiving light emitted by the chromophores (5) through a filter (29) for rejecting excitation light.

37. (Amended) A device according to claim 36, characterized in that it comprises two said photodetector matrices (17) placed respectively below and above the chromophoric elements (5) and associated with rejection filters (23, 29) for receiving the light emitted by the chromophoric elements over two distinct wavelengths.

A7

39. (Amended) A device according to claim 1, characterized in that it comprises a planar waveguide (25) for supplying excitation light (λ_{exc}) to the chromophoric elements (5).

41. (Amended) A device according to claim 38, characterized in that the waveguide (14, ~~25~~) comprises channels (15) close to each chromophoric element (5), said channels defining a blazed grating arranged to direct the light collected by the waveguide towards the collecting device.

A8

42. (Amended) A device according to claim 1, characterized in that the chromophoric elements (5) are selected from the group formed by molecules that can emit chromophoric or chromogenic signals and semiconductor nanostructures bound to the upper face (44) of the support (1) and capable of receiving a probe (respectively a target) that can interact with a target (respectively a probe).

43. (Amended) A device according to claim 1, characterized in that the chromophoric elements (5) are couples comprising a target (respectively a probe) having interacted with a probe (respectively a target) integral with the upper surface (24) of the support (1).